WHAT IS CLAIMED IS:

1. A method for the verification of anti-jamming in a communications system comprising several sensors or adaptive antennas, comprising at least the following steps :

- estimating the mean power $\pi;\hat{}_{y}$ of the output of the communications system,
- estimating the respective power values Pu or P'u, of a station u, the antenna noise Pa or P'a, the thermal noise PT, or P'T,
- estimating at least one of the following ratios :

$$J_{tot}/S_{tot} = \left(\sum_{p=1}^{P} ; ; \quad P_p \right) / \left(\sum_{u=1}^{U} ; ; \quad P_u \right) \qquad (22)$$

with p = the jamming unit

= sum of the power values of the residual jamming units/sum of the power values of the stations on the reception band B.

$$J_{tot}/S_u = \left(\sum_{p=1}^{P} ; ; \quad P_p \right) / P_u \qquad (23)$$

= sum of the power values of the residual jamming units/power of the station u in the reception band B.

$$J_u/S_u = \left(\sum_{p=1}^{P} ; ; \quad P_{pu} \right) / P_u \qquad (24)$$

With Ppu = power of the jamming unit p in the reception band Bu.

- comparing at least one of the three ratios with a threshold value.

2. A method for the verification of anti-jamming according to claim 1, comprising at least one step for estimating the mean power $\hat{\pi}_y$, for an output from a number K of samples, $y(k)$, $1 \leq k \leq K$ *of this output*, given by

$$\hat{\pi}_y = \frac{1}{K} \sum_{k=1}^{K} |y(k)|^2$$

(25)

3. A method for the verification of anti-jamming according to claim 1, comprising a step of estimation $\hat{P}_u$, $\hat{P}'_u$ of the power $\boldsymbol{P}_u$, $\boldsymbol{P}'_u$ in using, firstly, *a priori* knowledge of the parameters w and G_{num} for a digital application of the adaptive filters and $|\alpha|^2$, w and G for an analog application of the filters and secondly the estimation of the parameters π_u and $\boldsymbol{S}_u$.

4. A method for the verification of anti-jamming according to claim 1 comprising an estimation $\hat{P}_u$, $\hat{P}'_u$ of the power $\boldsymbol{P}_u$, $\boldsymbol{P}'_u$ in using, firstly, *a priori* knowledge of the parameters w and G_{num} for a digital application of the adaptive filters and $|\alpha|^2$, w and G for an analog application of the filters and secondly the estimation of the parameter η_a.

5. A method for the verification of anti-jamming according to claim 1 comprising a step of estimation $\hat{P}_u$, $\hat{P}'_u$ of the power $\boldsymbol{P}_u$, $\boldsymbol{P}'_u$ in using *a priori* knowledge of the parameters w and G_{num} for a digital application of the adaptive filters and $|\alpha|^2$, w and G for an analog application of the filters and secondly the estimation of the parameter η_T.

6. A method for the verification of anti-jamming according to one of the claims 1, 2, 3, 4 and 5 comprising a step of estimation $\hat{J}_{tot} / \hat{S}_{tot}$, of the ratio J_{tot}/S_{tot} given by

$$\hat{J}_{tot} / \hat{S}_{tot} = (\hat{\pi}_y - \sum_{u=1}^{U} \hat{P}_u - \hat{P}_a - \hat{P}_T) / (\sum_{u=1}^{U} \hat{P}_u) \quad (26)$$

7. A method for the verification of anti-jamming according to one of the claims 1, 2, 3, 4 and 5 comprising a step of estimation $\hat{J}_{tot} / \hat{S}_u$, of the ratio J_{tot}/S_u, given by

$$\hat{J}_{tot} / \hat{S}_u = (\hat{\pi}_y - \sum_{u=1}^{U} \hat{P}_u - \hat{P}_a - \hat{P}_T) / \hat{P}_u \quad (27)$$

8. A method of verification of anti-jamming according to the claims 1, 2, 3, 4 and 5 comprising a step of estimation $\hat{J}/\hat{S}_u$, of the ratio J/S_u in using the total power of residual jamming units in the B_u band of the working station u given by

$$\hat{J} / \hat{S}_u = (\hat{\pi}_{yu} - \hat{P}_u - \sum_{v \neq u} \hat{P}_{vu} - \hat{P}_{au} - \hat{P}_{Tu}) / \hat{P} \quad (28)$$

9. A method of verification of anti-jamming according to one of the claims 1 to 8 comprising a step of determination of the precision of estimation, and wherein this value is used to set the threshold.

10. A system for the verification of anti-jamming in a communications system comprising several sensors or adaptive antennas, a ground station and a piloting device, comprising at least the following elements: for a verification by channel, from the ground and for a reception band B, a computer integrated into the piloting device and an onboard computer, the two computers being programmed to execute the following steps :

Communications Channel Power Measurement : Onboard function parametrized from the ground by the *Onboard Param VAA* function,

VAA Gain : Ground function,

Communications channel power measurement : onboard function,

VAA Processing : Ground function.

11. A system for the verification of anti-jamming in a communications system comprising several sensors or adaptive antennas, a ground station and a piloting device, comprising at least the following elements :

for a verification by station, an onboard computer and a ground computer, the computers being programmed to execute the following functions :

Communications Channel Power Measurement : onboard function parametrized from the ground by the *Onboard Param VAA* function,

VAA Gain : ground function,

Acquisition of Communications Channel : onboard function parametrized from the ground by the *Onboard Param VAA* function,

VAA Processing : ground function.

12. A use of the method according to claim 1 or of the system according to one of the claims 10 and 11 to a space communications system.